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EXAMINER

LE, HUYEN D

ART UNIT

PAPER NUMBER

2643

DATE MAILED: 06/04/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/648,000

Applicant(s)

WIBERG ET AL.

Examiner

HUYEN D. LE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 12-27 is/are rejected.
- 7) ☒ Claim(s) 2-11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: a control unit 5 can not be found in the drawings. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 22 is objected to because of the following: "especially" in line 2 should be deleted for a positive limitation. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. Claim 20 recites the limitation "the gauge" in line 2. There is insufficient antecedent basis for this limitation in the claim.

4. Regarding claim 26, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

5. Regarding claim 27, the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

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Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Olsson (U.S. patent 4,359,962).

Regarding claim 1, Olsson teaches a speaker which comprises one first chamber (17A, col. 2, lines 57-63) having one first opening (19A) to the surroundings (figures 2-4 and see col. 1, lines 52-55), one second chamber (17B, col. 2, lines 57-63) having one second opening (19B) to the surroundings, and means of valve mechanism (15, 16) as claimed.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 12-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olsson et al. (U.S. patent 4,359,962).

Regarding claims 12 and 14, Olsson teaches the valve mechanism consisting of a tube (10, 15) that has an opening (11) to the surroundings and a drive mechanism (15, 20). Olsson shows one opening (16) rather than a plurality of openings as claimed. However, it would have been obvious to one skilled in the art to provide a plurality of openings (16) on the tube (10, 15) for better controlling the air pressure in the resonator tube.

Regarding claim 13, Olsson teaches two chambers (17A, 17B) rather than four chambers as claimed. However, it would have been obvious to one skilled in the art to provide more chambers (17A, 17B) of Olsson which are stacked one above for better providing and controlling the air pressure in the resonator tube.

Regarding claim 15, Olsson shows several tubes (10, 15, figures 2-4) over a surface as claimed.

Regarding claim 16, Olsson teaches the drive mechanism which is an electromagnetic drive unit as claimed (col. 6, lines 1-64)

Regarding claim 17, Olsson does not specifically shows the drive mechanism which is a piezo-electric drive unit as claimed. However, Olsson does not restrict to any type of driving mechanism for the system. Further, providing a piezo-electric drive unit in a sound generator is very well known in the art.

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Therefore, it would have been obvious to one skilled in the art to provide any type of drive unit such as a piezo-electric drive unit in the sound generator of Olsson for an alternate choice.

Regarding claim 18, as broadly claimed, Olsson teaches a control unit as claimed (col. 6, lines 1-18 and lines 50-64).

Regarding claims 18-20, as interpreted in a different manner, Olsson does not specifically disclose a control unit for translating an input signal to an equivalent electrical control signal as claimed. However, Olsson does not restrict to any type of the control unit (col. 6, lines 50-64).

Therefore, it would have been obvious to one skilled in the art to provide any type of control unit such as an artificial neuron net or the control unit being connected to a gauge for better measuring and controlling the air pressure in the system.

Regarding claims 21-27, Olsson does not specifically disclose the application of the sound generator as claimed. However, it is known in the art to apply a sound generator to any type of an active noise suppression or concerts, cinemas, homes or in earphones, headphones or telephones.

Therefore, it would have been obvious to one skilled in the art to provide the sound generator of Olsson in any application such as an active noise suppression in jet engines, ventilation systems, gas turbine outlets, exhaust systems of combustion engines, concerts, cinemas, homes or in earphones, headphones or telephones for greater application.

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Allowable Subject Matter

10. Claims 2-11 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dijkstra (U.S. patent 4,607,382) teaches an electroacoustic transducer which comprises a control unit.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUYEN D. LE whose telephone number is (703)305-4844. The examiner can normally be reached on 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CURTIS KUNTZ can be reached on (703) 305-4708. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



HL
May 27, 2004



HUYEN LE
PRIMARY EXAMINER